

Appl. No.: 09/870,258
Amdt. dated May 7, 2004
Reply to final Office action of April 6, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A computer system, comprising:
a notebook computer having an expansion bus;
a docking station having an expansion bus; and
a communication pathway coupling the notebook computer and the docking station;
wherein the notebook computer determines whether the notebook computer expansion bus should be coupled to the docking station expansion bus by communicating ~~communicates~~ across the communication pathway ~~to determine whether the docking station is compatible with the notebook computer, and wherein the docking station determines whether the docking station expansion bus should be coupled to the notebook computer expansion bus by communicating~~ ~~communicates~~ across the communication pathway ~~to determine whether the notebook computer is compatible with the docking station, each communication prior to electrically coupling the expansion bus of the notebook computer to the expansion bus of the docking station.~~
2. (Original) The computer system as defined in claim 1 wherein said communication pathway further comprises a serial communication pathway.
3. (Original) The computer system as defined in claim 2 wherein the serial communication pathway further comprises an Inter-Integrated Circuit (I²C) bus.

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4. (Currently Amended) The computer system as described in claim 1 wherein the notebook computer further comprises:

- a microprocessor;
 - a system main memory;
 - a first bridge logic device coupling said microprocessor and system main memory;
 - a second bridge logic device coupled to the first bridge logic device by way of a primary expansion bus;
 - a notebook docking connector coupled to the second bridge logic device by way of the expansion bus of the notebook computer, the expansion bus being a secondary expansion bus;
 - an input/output device coupled to the second bridge logic device by way of a secondary expansion bus, and wherein said input/output device is configured to communicate across the communication pathway to determine whether the notebook computer expansion bus should be coupled to the docking station expansion bus~~the docking station is compatible with the notebook computer~~; and
- wherein said communication pathway is a notebook computer serial bus coupled between the docking connector and the input/output device.

5. (Original) The computer system as defined in claim 4 wherein the notebook computer serial bus further comprises an Inter-Integrated Circuit (I²C) bus.

6. (Currently Amended) The computer system as defined in claim 4 wherein said docking station further comprises:

- a docking station docking connector;
- a bus bridge coupled to the docking station docking connector, wherein said bus bridge bridges the secondary expansion bus of the notebook computer to an expansion bus of the docking station;

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a docking station serial bus coupled to the docking station docking connector;

a microcontroller coupled to the docking station serial bus, and wherein said microcontroller is configured to communicate across the communication pathway to determine whether the docking station expansion bus should be coupled to the notebook computer expansion bus~~the notebook computer is compatible with the docking station.~~

7. (Original) The computer system as defined in claim 6 wherein the serial communication pathway further comprises an Inter-Integrated Circuit (I²C) bus.

8. (Currently Amended) The computer system as defined in claim 6 further comprising:

a read only memory device (ROM) coupled to the second bridge logic device of said notebook computer;

a serial electrically programmable read only memory device (EPROM) coupled to the docking station serial bus;

wherein the input/output device of said notebook computer is further adapted to read information from the serial EPROM across the docking station serial bus as part of determining whether the docking station is compatible with the notebook computer; and

wherein the microcontroller of the docking station is further adapted to read information from said notebook computer ROM across the notebook computer serial bus as part of determining whether the docking station expansion bus should be coupled to the notebook computer expansion bus~~the notebook computer is compatible with the docking station.~~

9. (Original) The computer system as defined in claim 4 wherein the notebook computer further comprises:

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said notebook computer serial bus having a plurality of conductors;
said secondary expansion bus having a plurality of conductors;
a plurality of electrically controlled switches coupled one each between the docking connector and each of the plurality of conductors of the serial bus and the secondary expansion bus; and
said input/output device having a plurality of digital output signals coupled to the plurality of electrically controlled switches, said output signals configured to selectively activate the plurality of electrically controlled switches.

10. (Original) The computer system as defined in claim 9 wherein the input/output device is configured to activate the digital output signals coupled to the electrically controlled switches of the serial bus to allow the notebook computer and the docking station to communicate when determining whether the notebook computer and the docking station are compatible.

11. (Currently Amended) The computer system as defined in claim 9 wherein the input/output device is configured to activate the digital output signals coupled to the electrically controlled switches of the secondary expansion bus after a determination by both the notebook computer and the docking station that their respective expansion buses should be coupled together~~that the notebook computer and docking station are compatible.~~

12. (Currently Amended) A method of docking a notebook computer to a docking station, the method comprising:
coupling the notebook computer to the docking station;
transferring information about software of-executable on the docking station to the notebook computer;
transferring information about software of-executable on the notebook computer to the docking station;

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determining by the notebook computer whether the notebook computer and the docking station are sufficiently compatible to couple their expansion buses based on the information, and determining by the docking station whether the notebook computer and the docking station are sufficiently compatible to couple their expansion buses based on the information; and if both the notebook computer and the docking station agree to at least partial compatibility, electrically coupling a secondary expansion bus of the notebook computer to a bus bridge in the docking station.

13. (Currently Amended) A method of docking a notebook computer to a docking station, the method comprising:

coupling the notebook computer to the docking station;
transferring information about software executable on the docking station to the notebook computer by

~~The method as defined in claim 12 wherein transferring information between the notebook computer and the docking station further comprises:~~

establishing a serial communication pathway between the notebook computer and the docking station; and

transferring a read only memory (ROM) date of the docking station across the serial communication pathway to the notebook computer; and

transferring information about software executable on the notebook computer to the docking station by transferring a ROM date of the notebook computer across the serial communication pathway to the docking station;

determining whether the notebook computer and the docking station are compatible based on the information; and if both the notebook computer and the docking station agree to at least partial compatibility

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electrically coupling a secondary expansion bus of the notebook computer
to a bus bridge in the docking station.

14. (Previously Presented) The method as defined in claim 13 wherein establishing the serial communication pathway further comprises closing a plurality of electrically controlled switches coupling the serial communication pathway between the notebook computer and the docking station.

15. (Original) The method as defined in claim 13 wherein transferring information across the serial communication pathway further comprises transferring information across an Inter-Integrated Circuit (I²C) bus.

16. (Currently Amended) A method of docking a notebook computer to a docking station, the method comprising:

coupling the notebook computer to the docking station;

transferring information about software executable on the docking station
to the notebook computer;

transferring information about software executable on the notebook
computer to the docking station;

determining whether the notebook computer and the docking station are
compatible based on the information by

~~The method as defined in claim 12 wherein determining whether the
notebook computer and the docking station are compatible further
comprises:~~

executing a program in the notebook computer which
program determines whether the ROM date of the
docking station is compatible with the notebook
computer;

executing a program in the docking station which determines
whether ROM date of the notebook computer is
compatible with the docking station; and

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communicating a message by said docking station to said notebook computer, the message being one of approval and disapproval of electrically coupling the secondary expansion bus of the notebook computer to the bus bridge in the docking station;

electrically coupling a secondary expansion bus of the notebook computer to a bus bridge in the docking station if both the notebook computer and the docking station agree to at least partial compatibility.

17. (Previously Presented) The method as defined in claim 16 wherein executing the program in the notebook computer further comprises comparing the ROM date of the docking station to a table containing information about a plurality of docking stations.

18. (Previously Presented) The method as defined in claim 16 wherein executing the program in the docking station further comprises comparing the ROM date of the notebook computer to a table containing information about a plurality of notebook computers.

19. (Original) The method as defined in claim 12, wherein the determining step further comprises:

determining whether software in said docking station enables maximum functionality with the notebook computer; and if not, notifying a computer system user of a need to upgrade the docking station software.

20. (Original) The method as defined in claim 12, wherein the determining step further comprises:

determining whether software in the notebook computer enables maximum functionality with the docking station; and if not,

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notifying a computer system user of a need to upgrade the notebook computer software.

21. (Original) The method as defined in claim 20, wherein the determining step further comprises:

determining whether software in said docking station enables maximum functionality with the notebook computer; and if not,
notifying a computer system user of a need to upgrade the docking station software.

22. (Original) The method as defined in claim 21, wherein notifying the computer system user further comprises sending a message across a serial communication pathway to notify the computer system user.

23. (Original) The method as defined in claim 12 wherein electrically coupling the secondary expansion bus of the notebook computer to the bus bridge in the docking station further comprises closing a plurality of electrically controlled switches coupling the secondary expansion bus of the notebook to the bus bridge of the docking station.

24.-26. (Cancelled).

27. (Currently Amended) A docking station operable to dock to a notebook computer, the docking station comprising:

a docking station docking connector;
a bus bridge coupled to the docking station docking connector, wherein said bus bridge bridges a secondary expansion bus of the notebook computer to an expansion bus of the docking station;
a docking station serial bus coupled to the docking station docking connector; and

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a microcontroller coupled to the docking station serial bus, said microcontroller configured to determine the compatibility of the notebook computer by reading at least ~~one of~~ a read only memory (ROM) data ~~and or~~ a product code of the notebook over the docking station serial bus.

28. (Previously Presented) The docking station as defined in claim 27 wherein the microcontroller is further configured to communicate a vote to the notebook computer regarding whether to couple the secondary expansion bus of the notebook computer to the expansion bus of the docking station.

29. (Currently Amended) A method of operating a notebook computer being docked to a docking station, the method comprising:

coupling a serial bus to the docking station;
transferring information about the docking station across the serial bus to the notebook computer;
receiving a vote from the docking station being ~~one~~ a vote to couple a secondary expansion bus of the notebook computer to the docking station ~~and or~~ a vote not to couple the secondary expansion bus of the notebook computer to the docking station;
determining the compatibility of the notebook computer based on the transferred information; and if the notebook computer is compatible with the docking station and the docking station votes to couple,
coupling the secondary expansion bus of the notebook computer to the docking station.

30. (Original) The method as defined in claim 29 wherein coupling the serial bus to the docking station further comprises:

coupling the serial bus of the notebook computer to a plurality of electrically controlled switches, which switches selectively couple the serial bus of the notebook to a serial bus of the docking station;

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activating the plurality of electrically controlled switches; by
asserting an output signal of a device within the notebook computer.

31. (Original) The method as defined in claim 30 wherein asserting an output signal of a device within the notebook computer further comprises asserting a general purpose digital output signal of a Super Input/Output controller.

32. (Original) The method as defined in claim 29 wherein coupling the secondary expansion bus of the notebook computer to the docking station further comprises:

coupling bus conductors of the secondary expansion bus to a plurality of electrically controlled switches, which switches selectively couple the secondary expansion bus to the docking station;
activating the plurality of electrically controlled switches; by
asserting an output signal of a device within the notebook computer.

33. (Original) The method as defined in claim 32 wherein asserting an output signal of a device within the notebook computer further comprises asserting a general purpose digital output signal of a Super Input/Output controller.

34. (Original) The method as defined in claim 29 further comprising generating a message for a computer system user if said docking station requires a software update.

35. (Original) A method of operating a docking station for docking with a notebook computer, the method comprising:

transferring information about the notebook computer across a communication pathway;
determining by the docking station the compatibility of the docking station with the notebook computer based on the information; and, based on that determination,

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sending a message ~~across said communication pathway from the docking station to the notebook computer~~ indicating one of the docking station's approval or disapproval of further electrically coupling the docking station to the notebook computer.

36. (Original) The method as defined in claim 35 further comprising sending a message across the communication pathway which invokes a message to the notebook computer user indicating the need to upgrade software of the notebook computer.

37. (Original) The method as defined in claim 36 wherein sending the message across the communication pathway further comprises sending the message across an Inter-Integrated Circuit (I²C) bus.